PROJECT DESCRIPTION

I. GENERAL

This project involves upgrading the pedestrian signals to APS/CPS at the intersection of MD 26 at Pikeswood Drive in Baltimore County. MD 26 is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

1. The intersection will operate in a NEMA 6-Phase, fully actuated mode with the MD 26 approaches operating with a permissive/protective left turn phase and the Pikeswood Drive approaches operating concurrently. Pedestrian crossing is provided for all legs of the intersection. There is an alternate pedestrian phase to cross MD 26.

NOTES

1. For final pavement markings, refer to the pavement marking plans, as applicable; other than those detailed on the plan. All pavement markings shall be installed in accordance with Administartion standards.
2. The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly label each cable.
3. All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections, highest roadway profile grade for open sections, to meet clearances as specified in the appropriate 800 series Standard Plates. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
4. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may *be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur,* the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
5. The contractor shall maintain the continuous operation of all interconnect, vehicular, pedestrian detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
6. APS will function as follows:
   TO CROSS LIBERTY ROAD:
   a. When pedestrian locates and presses push button for extended time, the audible message will be "Wait to cross Liberty at Pikeswood, Wait."
   b. When Walk phase begins, the message will be rapid tick which will last for the duration of the Walk phase.
   TO CROSS PIKESWOOD DRIVE:
   a. When pedestrian locates and presses push button for extended time, the audible message will be "Wait to cross Pikeswood at Liberty, Wait."
   b. When Walk phase begins, the message will be rapid tick which will last for the duration of the Walk phase.
7. Push buttons are to be located so that they can be activated by a person in a wheelchair reaching less than 18" from a 60" X 60" level landing area with a cross slope of less than or equal to 2%.
8. The seperation between push buttons is to be measured from face of push button to face of push button, not center of pole to center of pole.
9. Push button arrows are to be parallel to the crossing for which they are intended.
10. Location of accessible pedestrian signal push buttons must meet location requirements of MDMUTCD Sec. 4E.09 and Fig. 4E.2 and the NCHRP publication "Accessible pedestrian signals: Guide to best practice." If not met, the Contractor is to stop work on push button locations until a design waiver is obtained, approved by the Director, Office of Traffic Safety.
11. All internal cabinet wiring shall be performed by SHA forces. Contact Ed Rodenhizer at 410-787-7650 72 hours prior to construction.

CONTACTS

DISTRICT 4

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410-229-2310/2311

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MR. MICHAEL PASQUARIELLO
ASSISTANT DISTRICT ENGINEER - UTILITIES
410-229-2341

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410-787-7630

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410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7670

MR. MIKE STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST

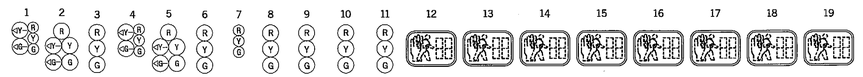
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

CAT CODE	DESCRIPTION	UNITS	QUANTITY
973023	SHEET ALUMINUM SIGNS CONSISTING OF:	SF	15.5
	R3-5(R) (30"X36") MAST ARM MOUNT	EA	1
	R10-3(1) (9"X15") POLE MOUNT	EA	8

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

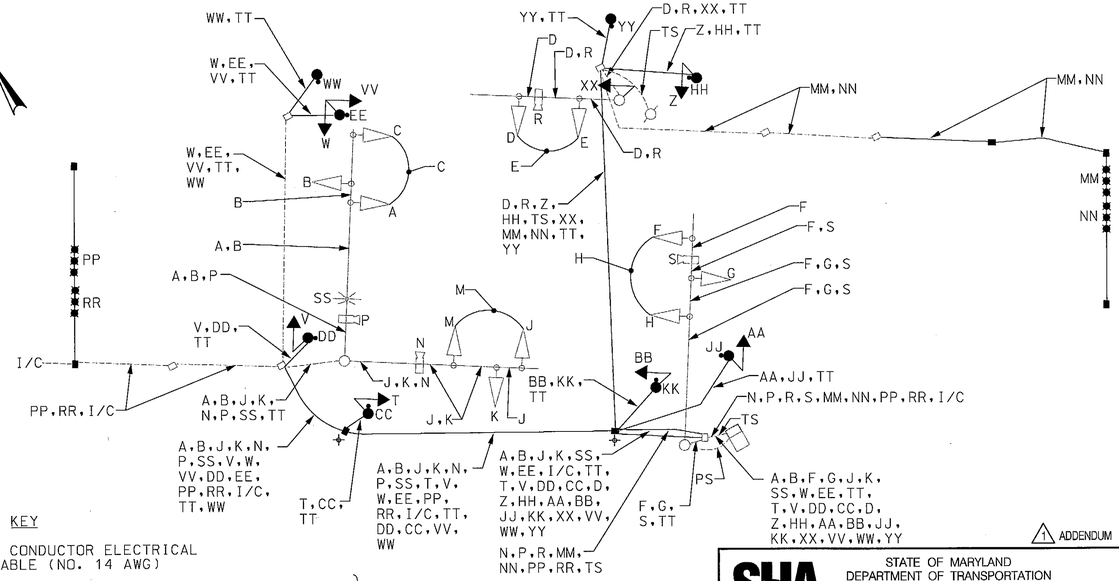
CAT CODE	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	3
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	500
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	120
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT	EA	8
800000	2-WIRE CENTRAL CONTROL UNIT	EA	1
800000	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON STATION AND SIGNS	EA	8
860265	RELOCATE EXISTING SIGNAL HEAD	EA	1
800000	DISCONNECT, PULL BACK AND REROUTE EXISTING CABLE	LF	800
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	5
801711	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS	SF	4
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	510
805115	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	210
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	220
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	70
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	200
810605	NONINVASIVE DETECTOR, 1000 FOOT LEAD-IN CABLE	EA	4
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	7
813015	INSTALL OVERHEAD SIGN	SF	7.5
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	4
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	8
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	2
801607	INSTALL SHEET ALUMINUM SIGN	SF	8
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1170
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1300
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1500
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	200
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	2
800000	LED MODULE - ANY SIZE	EA	41

PHASE CHART



PHASE 1 AND 5	←G/R	←G/R	R	←G/R	←G/R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	PHASE 1 AND 5 MAY CHANGE TO PHASE 1 AND 6, PHASE 2 AND 5, OR PHASE 2 AND 6																		
PHASE 1 AND 6	←G/G	←G/G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 AND 6 CHANGE	←Y/G	←Y/G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	←G/G	←G/G	G	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
2 AND 5 CHANGE	R	R	R	←Y/G	←Y/G	G	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
~~*PHASE 2 AND 6*~~	~~G~~	~~G~~	~~G~~	~~G~~	~~G~~	~~G~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~WK~~	~~WK~~	~~WK~~	~~WK~~	~~DW~~	~~DW~~	~~DW~~	~~DW~~
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



KEY

A, B, D, F, G, J, K	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C, E, H, M, T, V, W, Z, AA, BB, VV, XX	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
CC, DD, EE, HH, JJ, KK, WW, YY	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
SS	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
N, P, R, S	VIDEO DETECTION CABLE
MM, NN, PP, RR	NON-INVASIVE LOOP LEAD-IN CABLE
TT	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
PS	EXISTING ELECTRICAL SERVICE FEED
I/C	EXISTING INTERCONNECT
TS	EXISTING TELEPHONE SERVICE
+	GROUND ROD

(1) ADDENDUM NO. 1, 3/15/11

SABRA, WANG & ASSOCIATES, INC.
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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 26 (LIBERTY ROAD) AND PIKESWOOD DRIVE
RANDALLSTOWN, MARYLAND

GENERAL INFORMATION SHEET

SCALE N.T.S ADVERTISED DATE DEC. 2010 CONTRACT NO. BA4325177

DESIGNED BY	M.JENIDI	COUNTY	BALTIMORE
DRAWN BY	M.JENIDI	LOGMILE	03002604.37
CHECKED BY	K.RINIKER	TIMS NO.	H424
F.A.P. NO.	SEE TITLE SHEET	TOD NO.	

TS NO. 1858B	DRAWING pSG OF N001	SHEET NO. 33 OF 34

BY: Sdu -

PLOTTED: Wednesday, March 09, 2011 AT 03:10 PM
FILE: R:\2007\44 BCS 2007-04B_ Hwy Eng_D4_McCorm\ck_$150K\TASK 9\DWG\signal\pSG-N001_MD26_at_Pikeswood.dgn